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| 10/542,034 | 07/13/2005 | Akira Kuramori | OGW-0374 | 8695 |

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| EXAMINER |
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JOHNSTONE, ADRIENNE C

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| ART UNIT | PAPER NUMBER |
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1791

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05/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--|--|
| Office Action Summary | Application No. 10/542,034 | Applicant(s) KURAMORI, AKIRA | |
| | Examiner Adrienne C. Johnstone | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20070713</u> . | 6) <input checked="" type="checkbox"/> Other: <u>sketch of proposed drawing correction</u> . |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species a), claims 1-6 in the reply filed on January 24, 2008 is acknowledged.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the reinforcement layer extension inside the maximum width belt layer end and the reinforcement layer extension outside the maximum width belt layer end recited in claim 5 must be shown or the feature(s) canceled from the claim(s) (see attached sketch for one way to overcome this objection). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

Art Unit: 1791

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 2002-356103 A in view of European Patent Application 1 241 023 A2.

JP '103 discloses a reduced noise pneumatic tire having a reinforcement layer 4 at each end portion of the belt 3 (translation paragraphs 0005-0061), and EP '023 teaches to mount such pneumatic tires on a light metal wheel such as an aluminum alloy wheel having fin parts 16 to increase wheel rigidity and thus reduce noise while maintaining low wheel weight (description paragraphs 0001-0029); it would therefore have been obvious to one of ordinary skill in the art to mount the JP '103 pneumatic tire on the EP '023 wheel to further reduce noise while maintaining low wheel weight. As to the claim 1 wheel rigidity index range, the close correspondence of structure and properties between the claimed tire/wheel assembly and the above tire/wheel assembly (same light metal material with increased rigidity to reduce noise) provides sufficient basis for the examiner to infer that the reference wheel has a wheel rigidity index falling within the claimed range; burden is thus shifted to applicant to show an unobvious difference (MPEP 2112, 2112.01). As to claim 2, see

Art Unit: 1791

Figures 2, 4, and 7 where the reinforcement layers 4 are inserted between the belt 3 and the carcass 2.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 2002-356103 A in view of European Patent Application 1 241 023 A2 as applied to claims 1, 2 and 6 above, and further in view of Published PCT Application WO 01/92039 A1.

WO '039 teaches to reduce tire rolling resistance by providing the coating rubber in low angle belt reinforcing layers with a loss tangent $\tan \delta = E''/E'$ in the range of 0.012-0.16 (description p. 1 line 3 - p. 4 line 1, p. 6 line 21 - p. 7 line 12, p. 8 line 30 - p. 10 line 23); it would therefore have been obvious to one of ordinary skill in the art to provide the coating rubber of the belt reinforcing layers in the tire of the above tire/wheel assembly with a loss tangent in the range taught by WO '039, including the exemplary value of 0.16, in order to reduce tire rolling resistance. As to claim 4, the spirally wound cord f can be aramid (JP '103 translation paragraphs 0015 and 0026) and can be wound at an angle of up to 15° relative to the circumferential direction (JP '103 translation paragraph 0030).

7. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application 0 554 108 A1 in view of European Patent Application 1 241 023 A2.

EP '108 discloses a low weight, low rolling resistance pneumatic tire having a reinforcement layer 3 at each end of the belt 2 (embodiment of Figure 1, p. 2 lines 34-46, p. 3 line 48 - p. 4 line 14, p. 5 line 14 - p. 6 line 39, Invention Tire 1), and EP '023 teaches to mount such pneumatic tires on a light metal wheel such as an aluminum alloy wheel having fin parts 16 to increase wheel rigidity and thus reduce noise while maintaining low wheel weight (description paragraphs 0001-0029); it would therefore have been obvious to one of ordinary skill in the art to mount the EP '108 pneumatic tire on the EP '023 wheel to reduce noise while maintaining low weight of the tire/wheel assembly. As

Art Unit: 1791

to the claim 1 wheel rigidity index range, the close correspondence of structure and properties between the claimed tire/wheel assembly and the above tire/wheel assembly (same light metal material with increased rigidity to reduce noise) provides sufficient basis for the examiner to infer that the reference wheel has a wheel rigidity index falling within the claimed range; burden is thus shifted to applicant to show an unobvious difference (MPEP 2112, 2112.01).

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application 0 554 108 A1 in view of European Patent Application 1 241 023 A2 as applied to claims 1 and 6 above, and further in view of Japanese Patent Application 2002-356103 A.

JP '103 teaches to improve high speed durability and reduce noise in such tires by providing the belt reinforcement layers with slightly higher rigidity in the part extending beyond the maximum width belt layer, setting the extension 4b outside the maximum width belt layer in the range of 5%-20% of the maximum belt width W and setting the extension 4a inside the maximum width belt layer in the range of 5%-30% of W (translation paragraphs 0025-0030 and 0039-0040, Figures 4-6); it would therefore have been obvious to one of ordinary skill in the art to improve high speed durability and reduce noise in the tire of the above tire/wheel assembly by providing the belt reinforcement layers with slightly higher rigidity in the part extending beyond the maximum width belt layer, setting the extension 4b outside the maximum width belt layer in the range of 8%-15% of the maximum belt width W as required in EP '108 and setting the extension 4a inside the maximum width belt layer in the range of 5%-30% of W which for the Invention Tire 1 results in the outside extension being 8 mm - 15 mm and the inside extension being 5 mm - 30 mm. As to the claimed particular values of 10 mm outside extension and 5 mm inside extension, the ranges are narrow enough so that each percentage from 8%-15% and 5%-30%, respectively, are disclosed with sufficient specificity including the particular values of 10 mm (10%) and 5 mm (5%), respectively; in

Art Unit: 1791

any case, it would have been obvious to one of ordinary skill in the art to select values from within the ranges taught by the references absent unexpected results.

9. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baran (7,086,440 B2) in view of European Patent Application 1 241 023 A2.

Baran discloses an improved high speed durability pneumatic tire having a reinforcement layer 32 at each end of the belt structure 24 between innermost belt layer 28 and outermost carcass layer 12 (col. 4 line 31 - col. 6 line 27, Example Tire C), and EP '023 teaches to mount such pneumatic tires on a light metal wheel such as an aluminum alloy wheel having fin parts 16 to increase wheel rigidity and thus reduce noise while maintaining low wheel weight (description paragraphs 0001-0029); it would therefore have been obvious to one of ordinary skill in the art to mount the Baran pneumatic tire on the EP '023 wheel to reduce noise while maintaining low wheel weight. As to the claim 1 wheel rigidity index range, the close correspondence of structure and properties between the claimed tire/wheel assembly and the above tire/wheel assembly (same light metal material with increased rigidity to reduce noise) provides sufficient basis for the examiner to infer that the reference wheel has a wheel rigidity index falling within the claimed range; burden is thus shifted to applicant to show an unobvious difference (MPEP 2112, 2112.01). As to claim 5, the maximum disclosed extension width V for the 15 mm reinforcement layer of Example Tire C is 10 mm (col. 6 lines 9-17), resulting in a 5 mm extension inside the maximum width belt layer 28.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose light metal wheels with increased rigidity to reduce noise: Renard et al. (6,074,015) and Japanese Patent Applications 2000-158902 A and JP 2002-187402 A.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adrienne C. Johnstone whose telephone number is (571) 272-1218. The examiner can normally be reached on Monday-Friday, 1:00PM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Adrienne C. Johnstone
Primary Examiner
Art Unit 1791

Adrienne Johnstone

/Adrienne C. Johnstone/

May 24, 2008